

Having thus described the invention, it is claimed:

Sub B1

1. A solvent-resin composition having reduced atmospheric reactivity, the composition consisting essentially of a resin component and a solvent component, the solvent component being 5% to 95% by total volume of the solvent-resin composition, the solvent component comprising a blend of from about 0.1% to about 99.9% by volume of a zero volatile organic compound (VOC) solvent selected from the group consisting of:

- 1) 1-bromopropane;
- 2) benzotrifluoride;
- 3) t-butylacetate;
- 4) methyl acetate;
- 5) parachlorobenzotrifluoride
- 6) acetone;
- 7) 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxybutane;
- 8) 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane;
- 9) 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane;
- 10) technical white oils (mineral oils); and
- 11) n-alkane (C12-C18),

blended with from about 0.1% to about 99.9% by volume of a reactive VOC solvent selected from the group consisting of:

- xylene;
- toluene;
- 524/86+ — n-methyl pyrrolidone;
- hexane;
- oxygenated solvents;
- propylene carbonate;
- glycol ethers;
- trichloroethylene;
- napthenic solvents;

- 524/474+ — iso-paraffins;
- epoxides;
- acetals;

nitroparaffins;
terpene;
dimethyl ether;
esters;
ketones;
ethyl acetate;
alcohols;
paraffins;
mineral spirits;
dibasic esters;
cycloalkanes; and
cycloalkene.

2. The composition according to claim 1 wherein the solvent component is present in the amount of from about 10% to about 95% by total volume of the composition.

3. The composition according to claim 2 wherein the solvent component is present in the amount of from about 30% to about 80% by total volume of the composition.

4. An adhesive resin-solvent composition comprising:
40% to 90%, by total volume of the composition, of a solvent composition comprising one or more zero VOC solvents selected from 1-bromopropane, benzotrifluoride and t-butylacetate, and a volatile organic compound (VOC) solvent,
5% to 35% of a tackifier, and
5% to 40% of a resin, said resin comprising at least one resin selected from the group consisting of styrene-butadiene, polychloroprene, polyvinyl chloride, acrylic, epoxy, urethane, nitrocellulose, and styrene.

5. The adhesive resin-solvent composition of claim 4, wherein, the zero VOC solvent is benzotrifluoride.

6. The adhesive resin-solvent composition of claim 4 wherein the zero VOC solvent is 1-bromopropane.

7. The adhesive resin-solvent composition of claim 4 wherein the zero VOC solvent is t-butylacetate.

Sub B3
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8. A coating or ink resin-solvent composition comprising:
10% to 90%, by total volume of the composition, of a solvent composition comprising a zero VOC solvent selected from t-butylacetate, 1-bromopropane, benzotrifluoride, and a VOC solvent, and
5% to 75% of a polymeric or hydrocarbon resin.

9. The coating or ink resin-solvent composition of claim 8 wherein the zero VOC solvent is t-butylacetate.

10. The coating or ink resin solvent composition of claim 8 wherein the zero VOC solvent is 1-bromopropane.

11. The coating or ink resin solvent composition of claim 8 wherein the zero VOC solvent is benzotrifluoride.

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12. An environmentally safe composition comprising a zero VOC blowing agent useful for the production of polyurethane foam, the composition comprising, by total weight of the composition:
1 to 100 parts by weight of a polyol;
1 to 50 parts by weight of toluene diisocyanate or methylene diphenylene diisocyanate;

2 parts by weight of water;
0.15 to 0.80 parts catalyst;
0.5 to 2 parts surfactant; and
4 to 20 parts acetone or methyl acetate.

13. An environmentally safe composition comprising a zero VOC blowing agent useful for the production of polyurethane foam, the composition comprising, by total weight of the composition:

1 to 100 parts by weight of a polyol;
1 to 50 parts by weight of toluene diisocyanate or methylene diphenylene diisocyanate;
2 parts by weight of water;
0.15 to 0.80 parts catalyst;
0.5 to 2 parts surfactant; and
4 to 20 parts 1-bromopropane.

14. An environmentally safe composition comprising a zero VOC blowing agent useful for the production of polyurethane foam, the composition comprising, by total weight of the composition:

1 to 100 parts by weight of a polyol;
1 to 50 parts by weight of toluene diisocyanate or methylene diphenylene diisocyanate;
2 parts by weight of water;
0.15 to 0.80 parts catalyst;
0.5 to 2 parts surfactant; and
4 to 20 parts 1-bromopropane blended with a zero VOC fluorinated compound.

15. An environmentally friendly adhesive, coating or ink solvent-resin composition comprising a solvent composition, said solvent composition comprising a high reactivity solvent (MIR greater than 1) and a low reactivity solvent (MIR less than 1), said low reactivity solvent being present in an amount effective to reduce the total reactivity of the solvent blend, said solvent composition being present in

Sub B4

an amount of from about 10% to about 90% by volume of the solvent-resin, further wherein the solvent resin composition comprises a polymeric or hydrocarbon resin, thereby producing an environmentally friendly adhesive, coating or ink composition.

¹³₁₆. The composition according to claim ¹²₁₅ consisting essentially of from about 10% to about 90% by volume of a low reactivity solvent (MIR less than 1) and about 5% to 45% of a polymeric or hydrocarbon resin.

Sub 135
17. An adhesive resin-solvent composition comprising:
40% to 90%, by total volume of the composition, of one or more zero VOC solvents selected from the group consisting of:

1-bromopropane;
benzotrifluoride;
t-butylacetate;
methyl acetate;
acetone;
1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxybutane;
1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane;
2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane;
technical white oils (mineral oils) ; and
n-alkane (C12-C18);

5% to 35% of a hydrocarbon resin as a tackifier, and
5% to 40% of a resin, said resin comprising at least one resin selected from the group consisting of styrene-butadiene, polychloroprene, polyvinyl chloride, acrylic, epoxy, urethane, nitrocellulose, and styrene polymer.

18. A coating or ink resin-solvent composition comprising:
10% to 90%, by total volume of the composition, of one or more zero VOC solvents selected from the group consisting of:

1-bromopropane;
benzotrifluoride;
t-butylacetate;
methyl acetate;

Sub B5
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acetone;
1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxybutane;
1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane;
2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane;
technical white oils (mineral oils); and
n-alkane (C12-C18);
a VOC solvent; and
5% to 75% of a polymeric or hydrocarbon resin.

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19. A method for reducing the atmospheric reactivity of a solvent-resin composition, wherein the solvent-resin composition comprises from about 5% to about 95%, by total volume of the composition, of a solvent component, said solvent component comprising a reactive VOC solvent selected from the group consisting of:

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xylene;
toluene;
n-methyl pyrrolidone;
hexane;
oxygenated solvents;
propylene carbonate;
glycol ethers;
trichloroethylene;
naphthenic solvents;
iso-paraffins;
epoxides;
acetals;
nitroparaffins;
terpene;
dimethyl ether;
esters;
ketones;
ethyl acetate;
alcohols;

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Sub B5

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paraffins;
mineral spirits;
dibasic esters;
cycloalkanes; and
cycloalkene,

wherein said solvent-resin composition has its atmospheric activity reduced by substituting from about 0.1% to about 99.9% of the reactive VOC solvent with a zero VOC solvent selected from the group consisting of:

- 1) 1-bromopropane;
- 2) benzotrifluoride;
- 3) t-butylacetate;
- 4) methyl acetate;
- 5) parachlorobenzotrifluoride;
- 6) acetone;
- 7) 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxybutane;
- 8) 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane;
- 9) 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane;
- 10) technical white oils (mineral oils); and
- 11) n-alkane (C12-C18).

¹⁷20. The method of claim ¹⁶19 wherein the resin is selected from the group consisting of adhesive resins, coating resins, ink resins, and blowing agent resins.

¹⁸21. The method according to claim ¹⁶19 wherein the solvent component is present in the amount of from about 10% to about 95% by total volume of the composition.

¹⁹22. The method according to claim ¹⁶19 wherein the solvent component is present in the amount of from about 30% to about 80% by total volume of the composition.

Add B8

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